packages in accordance with the terms of Space Act Agreements with their organizations. The Flight Data Company Ltd. (now Spirent-Heathrow) implemented the Report Generator in its Ground Replay and Analysis Facility. Teledyne Controls implemented Routine Events in its Flight Data Replay and Analysis System (FLDRAS).

Point of Contact: Thomas Chidester
(650) 604-6007
tchidester@mail.arc.nasa.gov

Performance Data Analysis and Reporting System

Irving C. Statler

The Performance Data Analysis and Reporting System (PDARS) provides decision makers with a comprehensive, accurate, and insightful method for routinely monitoring the operational health, performance, and safety of the National Airspace System (NAS). The purpose of PDARS is to provide the technological developments that will enable a cultural change from the current reactive approach, of identifying and alleviating life-threatening aviation conditions and events, to a more proactive approach, while still meeting the projected requirements of increasing air traffic. PDARS pursues this objective by establishing a capability for facility-level managers to monitor air traffic control performance in the NAS, identifying and analyzing operational performance problems, and designing and evaluating improvements. PDARS incorporates innovative technology for the real-time collection and rapid processing of large volumes of complex data, and state-of-the-art tools for extracting, presenting and visualizing information such as radar flight tracks.

Six FAA facilities representing a microcosm of the NAS—Southern California and San Francisco Bay TRACONs (Terminal Radar Approach Controls), Los Angeles and Oakland Centers, the Western-Pacific Region, and the System Command Center were selected to participate in an operational evaluation of the concept and tools. An initial PDARS prototype was implemented and fielded at the six sites. Data were accessed daily from all sites, processed overnight, and reports delivered routinely to all six facilities each morning. Examples of the displays and reports appear in figures 1 and 2, respectively. FAA personnel have been trained on PDARS, and both the system and its reports are being used on a day-to-day basis.

PDARS accomplished several key milestones in this process in FY00, including the completion, evaluation, and demonstration of a prototype network, generation of daily reports, and the design review and delivery of the first upgrades to the capabilities of the prototype network. Both informal feedback and a formal design review yielded positive comments on the prototype, guidance for where to pursue upgrades, and a drive to expand the capability to other facilities.

Point of Contact: Irving C. Statler
(650) 604-6654
istatler@mail.arc.nasa.gov

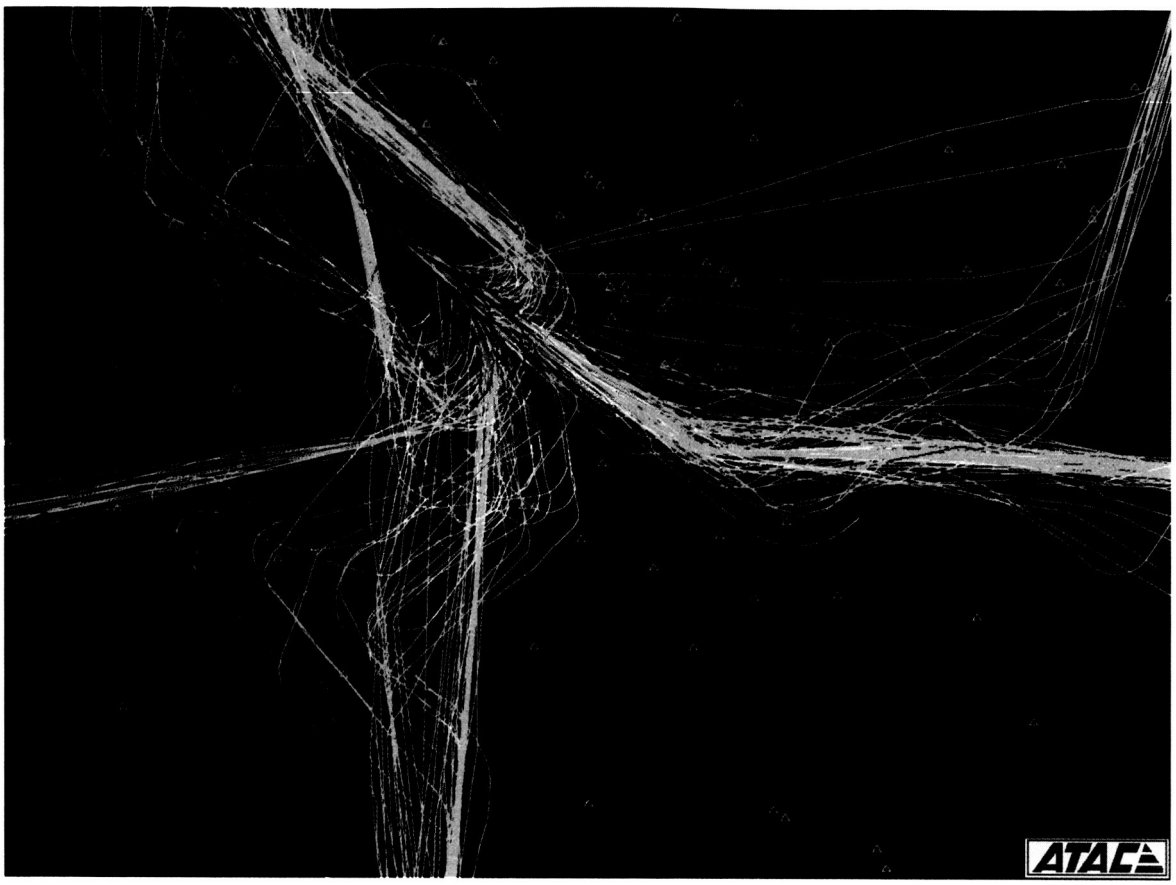
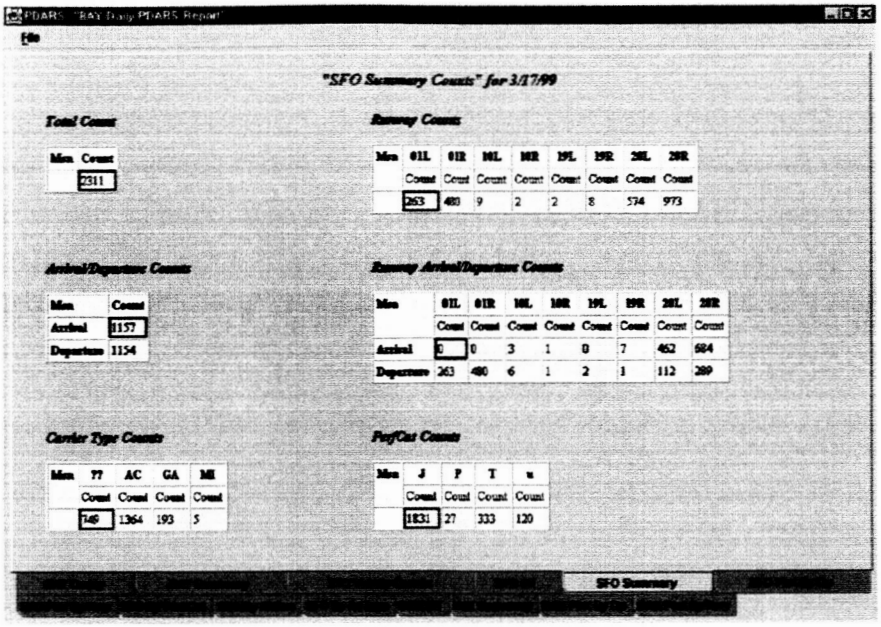


Fig. 1. Graphical depiction of traffic flow over time.



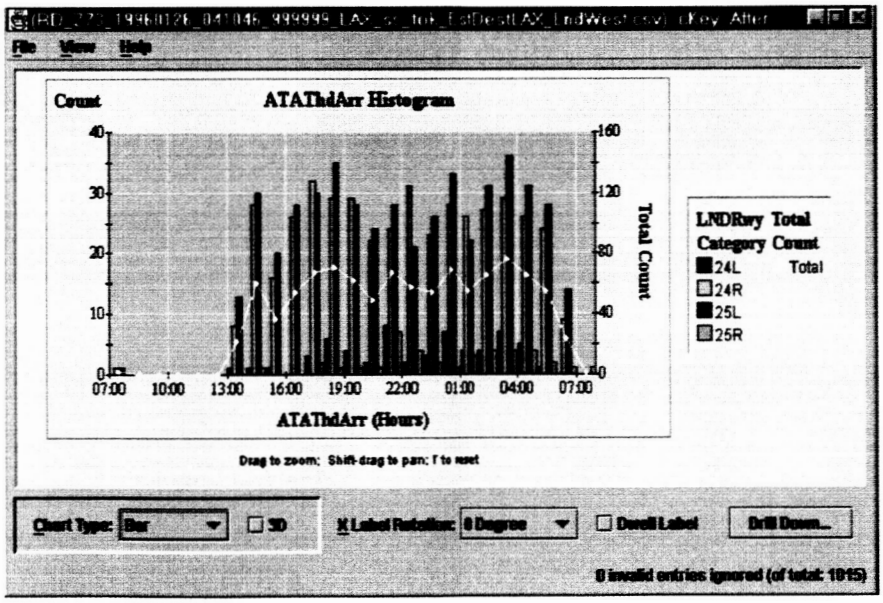


Fig. 2. Examples of data summaries.